

Name: _____

Math 10F&IPC

Chapter 7 System of Equations

Section 7.2 B: Solving a System of Linear Equations Graphically

1. Solve this linear system by graphing.

$$y = -2x + 2$$

$$y + 6 = 2x$$

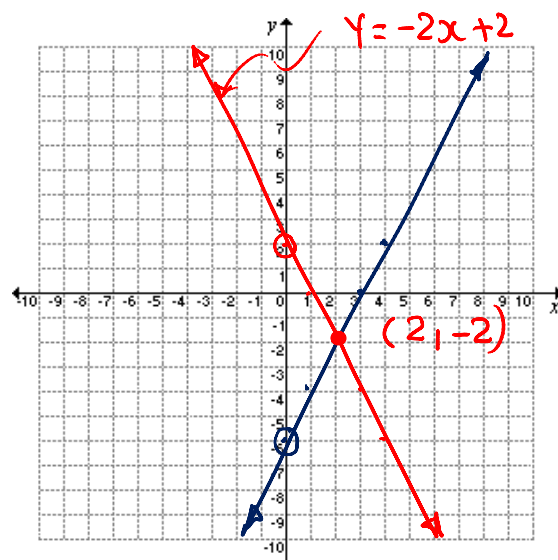
using $y = mx + b$ slope, yint

$$y = -2x + 2 \quad m = -2$$

$$y_{\text{int}} = 2$$

$$\text{solution } (2, -2) \quad y + 6 = 2x \quad y = 2x - 6 \quad m = 2$$

$$y_{\text{int}} = -6$$



2. Solve this linear system by graphing.

$$-3x - y = -5$$

$$4x - y = 2$$

solution $(1, 2)$

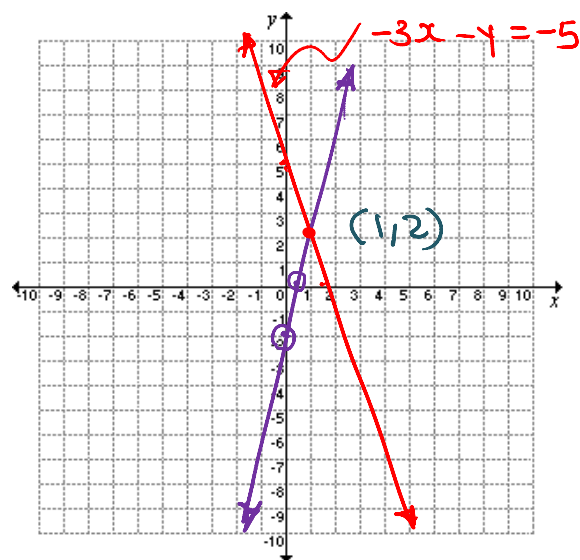
use x & y intercept

$$\begin{aligned} -3x - y &= -5 \\ -3x - 0 &= -5 \\ -3x &= -5 \\ x &= \frac{-5}{-3} \end{aligned} \quad \begin{aligned} x_{\text{int}} \text{ when } y &= 0 \\ x &= \frac{5}{3} \end{aligned}$$

$$y_{\text{int}} - \text{when } x = 0 \quad -3(0) - y = -5 \quad y = 5$$

$$\begin{aligned} 4x - y &= 2 \\ 4x - 0 &= 2 \\ 4x &= 2 \\ x &= \frac{2}{4} \\ x &= \frac{1}{2} \end{aligned}$$

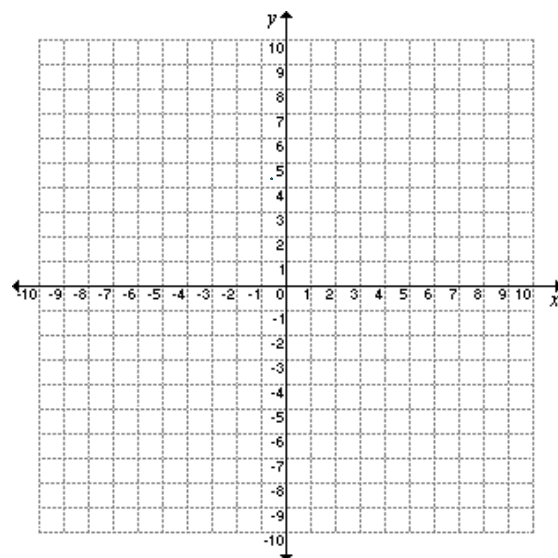
$$y_{\text{int}} \quad 4(0) - y = 2 \quad y = -2$$



3. Solve this linear system by graphing.

$$y = -3x - 5$$

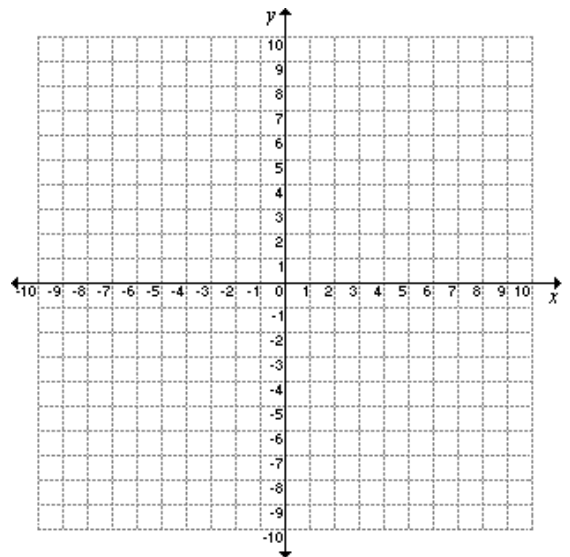
$$y - 1 = 3x$$



4. Solve this linear system by graphing.

$$y = -5x - 2$$

$$y + 2 = 2x$$



5. Solve this linear system by graphing.

$$6x - 7y = -4$$

$$-\frac{3}{5}y = 3x + 7$$

$$6x - 7y = -4$$

$$\frac{-7y}{-7} = \frac{-6x}{-7} \frac{-4}{-7}$$

$$y = \frac{6}{7}x + \frac{4}{7}$$

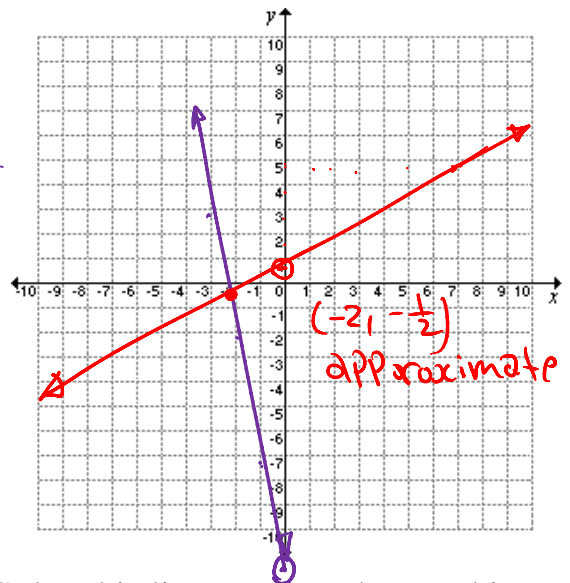
$$m = \frac{6}{7} \quad b = \frac{4}{7}$$

$$\left(-\frac{3}{5}y = 3x + 7\right) \times 5$$

$$\frac{-3y}{-3} = \frac{15x}{-3} + \frac{35}{-3}$$

$$y = -5x - 11\frac{2}{3}$$

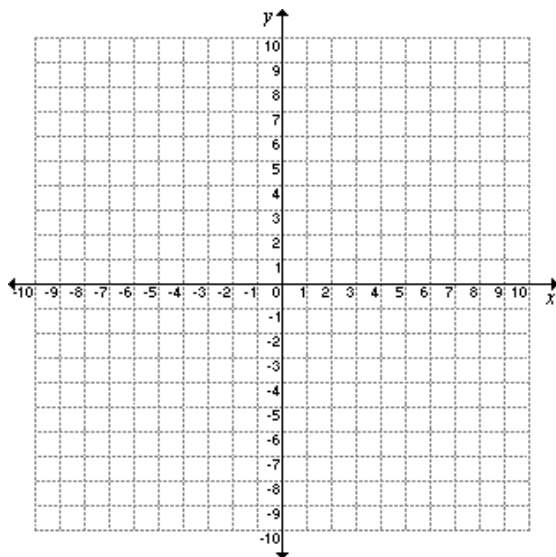
$$m = -5 \quad b = -11\frac{2}{3}$$



6. Solve this linear system by graphing.

$$-3x - 2y = 16$$

$$-x + y = -8$$



7. Solve this linear system by graphing.

$$y = -8$$

$$-3x + y = 7$$

